

Claims

1. Method for operating a steam generator (1) in which the continuous heating panel of an evaporator is arranged in a heating gas channel (6) which can be cross-flown in a more or less horizontal direction of a heating gas (x) which comprises a plurality of pipes of a steam generator (12) which are connected in parallel to each other which are constructed in such a way that they cross a flow medium (W) and are provided with the part of a more or less vertical down pipe (20) which can be cross-flown by the flow medium (W) in a downward direction and with the part of a riser pipe (22) connected downstream with respect to the down pipe on the flow medium side and which is more or less vertical and can be cross-flown by the flow medium in an upward direction, in which case the continuous heating panel of the evaporator (8) is arranged in such a way that one pipe of the steam generator (12) which is hotter than the other pipe of the steam generator (12) of the same continuous heating panel of the evaporator has a flow medium (W) rate which is higher than that of the other pipe of the steam generator, characterized in that the flow medium (W) of the continuous heating panel of the evaporator (8) is supplied in such a way that the flow medium D, W in the part of the down pipe (20) of the specific pipe of the steam generator (12) has a flow velocity which is higher than a minimum flow velocity predefined in the down pipe.

2. Method according to Claim 1 in which, as the minimum flow velocity, the flow velocity required for the entrainment of the steam bubbles generated in the relevant part of the down pipe (20) is specified.

3. Method according to claim 1 or 2 in which case the flow medium (W) is advantageously partially pre-evaporated before entering the continuous heating panel of the evaporator (8) in

such a way that, on entering the continuous heating panel of the evaporator (8), it has a steam content and/or an enthalpy of more than one predefined minimum steam content or a predefined minimum enthalpy.

5 4. Steam generator (1) in which the continuous heating panel of an evaporator is arranged in a heating gas channel (6) which can be cross-flown in a more or less horizontal direction of a heating gas (x), comprising a plurality of pipes of a steam generator (12) which are connected in parallel to each other, constructed in such a way that they cross a flow medium
10 (W) and are provided with the part of a more or less vertical down pipe (20) which can be cross-flown by the flow medium (W) in a downward direction and with the part of a riser pipe (22) connected downstream with respect to the down pipe on the flow
15 medium side and which is more or less vertical and can be cross-flown by the flow medium in an upward direction in which case the continuous heating panel of the evaporator (8) is arranged in such a way that one pipe of the steam generator (12) which is hotter than the other pipe of the steam generator
20 (12) of the same continuous heating panel of the evaporator has a flow medium (W) rate which is higher than that of the other pipe of the steam generator, characterized in that an further continuous heating panel of the evaporator (10) is connected upstream of the continuous heating panel of the
25 evaporator (8) on the flow medium side.

5. Steam generator (1) according to Claim 4 of which the further continuous heating panel of the evaporator (10) comprises a plurality of pipes of a steam generator (30) which are connected in parallel to each other. Said pipes of a steam generator (30) are constructed in such a way that they cross a
30 flow medium (W) and that one pipe of the steam generator (30) which is hotter than the other pipe of the steam generator (10) of the further continuous heating panel of the evapora-

tor, shows a flow medium rate (W) which is higher than that of the other pipe of the steam generator (30).

6. Steam generator (1) according to Claim 4 or 5 of which the further continuous heating panel of the evaporator (10) is dimensioned in such a way that in operating cases the flow medium (W) flowing into the downstream continuous heating panel of the evaporator (8) has a flow velocity which is higher than a minimum flow velocity required for the entrainment of the steam bubbles.

7. Steam generator (1) according to one of the Claims 4 to 6, characterized in that an the outlet accumulator (38) of the further continuous heating panel of the evaporator (10) of the pipes of the steam generator (30) connected downstream on the flow medium side is, in essence, aligned with its longitudinal axis parallel to the direction of a heating gas (x).

8. Steam generator (1) according to one of the Claims 4 to 7 of which the further continuous heating panel of the evaporator (10) comprises a plurality of pipe sets connected in series seen in the direction of a heating gas (x), each one of which is formed from a plurality of pipes of a steam generator (30) connected next to one another in the direction of a heating gas (x).

9. Steam generator (1) according to Claim 8, to the further continuous heating panel of the evaporator (10) of which a plurality of outlet accumulators (38), whose plurality correspond with the plurality of pipes of a steam generator (30) in each pipe set, aligned with their longitudinal axis parallel to the direction of a heating gas (x), are allocated while one pipe of the steam generator (30) of each pipe set joins each outlet accumulator (38) in each case.

10. Steam generator (1) according to one of the Claims 7 to 9,

in which case the or each outlet accumulator (38) of the further continuous heating panel of the evaporator (10) is integrated in each case in an allocated inlet accumulator (14) of the continuous heating panel of the evaporator (8) which is
5 connected downstream on the flow medium side in a constructional unit.

11. Steam generator (1) according to Claim 10, in which case the pipes of a steam generator (12) of the continuous heating panel of the evaporator (8) are connected to a common plane
10 aligned vertical to the heating gas direction (x) to which the inlet accumulators (14) are connected in each case.

12. Steam generator (1) according to one of the Claims 7 to 11 of which the outlet accumulator/s (38) is or are arranged above the heating gas channel.

15 13. Steam generator (1) according to one of the Claims 4 to 12 to which a gas turbine is connected upstream on the side of the heating gas.